

REMARKS

In response to the outstanding Office Action, Paper No./Mail Date 20041209, dated December 15, 2004, applicant has carefully studied the references cited by the Examiner and the Examiner's comments relative thereto.

Claims 1, 4, and 6 have been amended.

Claims 3 and 5 have been cancelled.

Claims 1-2, 4, and 6-7 remain in the application for consideration by the Examiner.

The specification has been amended for clarity.

No new matter has been added.

Reconsideration of the application, as amended, is respectfully requested.

The Examiner rejected Claims 3 and 5 under 35 U.S.C. §112, first paragraph. The Examiner stated:

"The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The originally filed specification does not support the recitation that the fold has a substantially rounded outer surface."

As originally filed, Figs. 2 and 3 clearly illustrate the fold of the tube with an outer surface thereof which is rounded. Fig. 1 includes contour lines generally showing the curvature. Additionally, in the sectional view shown in Fig. 3, it is clear that the outer surface of the fold created by the thicknesses 28 and 30 is rounded. Thus, it is submitted that support for the recitation that the fold has a substantially rounded outer surface. For clarity, the specification has been amended to include the description "The folded thicknesses 28, 30 result in an outer peripheral surface of the reinforcement flange 26 which is rounded as most clearly shown in Figs. 2 and 3. Rounded as used herein means orbicular or protuberant, for example." Rounded is defined in the Merriam-Webster Dictionary as "made round; flowing rather than jagged". Orbicular is defined in the Merriam-Webster Dictionary as spherical or circular, and protuberant is defined as "thrusting out from a surrounding or adjacent surface often as a rounded mass". These definitions, taken alone or in combination, accurately describe the outer surface of the fold shown in the drawings. Additionally, the definitions are consistent with a description in the specification of the process which forms the fold of the tube:

“The punch is caused to continue the inward movement until a circumferentially outwardly extending shoulder of the punch meets the unsupported end of the tube 12 and continues until the unsupported tube stock folds outwardly to a developed limit.”

As described, the tube material folds outwardly to a developed limit. Due to the nature of the tube stock material, and absent outside influences, the bending of the material will result in the outer surface which is rounded, orbicular, or protuberant, for example. It is submitted that the Examiner’s rejection based on 35 U.S.C. §112, first paragraph is improper. Thus, the Examiner’s favorable reconsideration of the rejection of Claims 3 and 5 based upon 35 U.S.C. §112, first paragraph, is respectfully requested. Although both Claims 3 and 5 have been cancelled, the recitations of these claims are included in Claims 1 and 4, respectively, which necessitates the reconsideration by the Examiner.

The Examiner rejected Claims 1-7 under 35 USC §102(e) as being anticipated by Roe. The Examiner stated:

“Roe discloses a receiver tube having the structure as claimed. Regarding claims 3 and 5, the fold of Roe is considered to have a substantially rounded outer surface to the same degree as claimed by applicant. The patentability of a product does not depend on its method of production. It is noted that applicant has already received a patent for the process of making the device (i.e. U.S. Patent 6,796,574).

Claims 3 and 5 have been cancelled. Also, applicant acknowledges that a patent has been received for the process of making the receiver tube, and thus, the recitation in the claims to the method have been removed. However, applicant submits that the structure as claimed is not anticipated by the cited reference, and is patentable. Amended Claim 1 recites in part “the first end of said tube is provided with an outwardly extending fold . . . wherein the fold has a rounded outer surface”. Roe does not disclose a fold having a rounded outer surface. Rather, the outer surface of the fold in Roe is linear or straight, as clearly shown in Figs. 3d and 4d. The tube material is forced into and completely fills a recess which determines the final shape of the outer surface. The recess has a rectangular shape, or a shape having linear sides. Thus, the outer surface of the fold in Roe is not rounded, and must be linear.

Several advantages are inherent in the structure of applicant’s invention. As indicated in the Declaration of Inventor and appended Test Results filed November 14, 2003, applicant’s invention has improved strength and durability characteristics over prior art receiver tubes. These improved characteristics result in a maximization of the safety of applicant’s structure. Safety is of great concern for receiver tubes due to the substantial loads imposed thereon. Special calculations to determine fill volumes, compressions amounts, etc.

are not required for applicant's invention as are required for other receiver tubes (see column3, lines 24-40). Variations in material tolerances are essentially absorbed by applicant's structure. As pointed out in a Preliminary Amendment filed March 22, 2004, variations in the wall thickness of the raw material stock are compensated for by the free flow of material to the outer dimension of the flange. This enables the utilization of a lower cost, readily available raw material stock in contrast to the higher cost raw material stock having tighter tolerances as needed in the manufacture of known receiver tubes. Additionally, since there are no sharp edges or corners, the tendency for corrosion is minimized. Thus, the unique structure of applicant's invention includes a number of unexpected and surprising results. These results are supported by the immense commercial success of the applicant's structure, also detailed in the Declaration of Inventor.

Due to the structural differences noted, and the benefits derived therefrom, it is submitted that Claim 1 is not anticipated under 35 USC §102(e) by Roe and should, therefore, be patentable.

Since Claim 1 is deemed patentable, Claim 2 which depends directly therefrom is considered patentable.

Amended Claim 4 recites in part "the first end of said tube having an outwardly extending flange portion . . . wherein the flange portion has an orbicular outer surface". Amended Claim 6 recites in part "the first end of said tube having a fold with a protuberant outer surface". For the same reasons discussed above for Claim 1, Claims 4 and 6 are not anticipated under 35 USC §102(e) by Roe and are deemed patentable.

Since Claim 6 is deemed patentable, Claim 7 which depends directly therefrom is considered patentable.

The Examiner's favorable reconsideration of the rejection based upon 35 USC §102(e) is respectfully requested.

The Examiner rejected Claims 1-7 under 35 USC §102(b) as being anticipated by Marquardt, for the same reasons listed for Roe.

Claims 3 and 5 have been cancelled. Also, applicant acknowledges that a patent has been received for the process of making the receiver tube, and thus, the recitation in the claims to the method have been removed. However, applicant submits that the structure as claimed is not anticipated by the cited reference, and is patentable. Amended Claim 1 recites in part "the first end of said tube is provided with an outwardly extending fold . . . wherein

the fold has a rounded outer surface". Amended Claim 4 recites in part "the first end of said tube having an outwardly extending flange portion . . . wherein the flange portion has an orbicular outer surface". Amended Claim 6 recites in part "the first end of said tube having a fold with a protuberant outer surface". Marquardt discloses a receiver tube structure having a pair of chamfered surfaces flanking a flat or linear outer perimeter surface 54 formed by a solid bead of material (see column 3, lines 10-23). No fold of material exists. Marquardt does not disclose a fold or a flange having a rounded outer surface. Rather, the outer surface of the bead in Marquardt is linear or straight as clearly shown in Fig 4. The tube material in Marquardt is formed by forcing tube material into a bead forming region which determines the final shape of the outer surface (see column 3, lines 31-56). It should also be noted that the process of Marquardt is conducted at an elevated temperature (see column 3, lines 51-56) and not by cold forming as claimed.

Due to the structural differences noted, and the benefits derived therefrom discussed above for Roe, it is submitted that Claims 1, 4, and 6 are not anticipated under 35 USC §102(b) by Marquardt and are deemed to be patentable.

Since Claim 1 is deemed patentable, Claim 2 which depends directly therefrom is considered patentable.

Since Claim 6 is deemed patentable, Claim 7 which depends directly therefrom is considered patentable.

The Examiner's favorable reconsideration of the rejection based upon 35 USC §102(b) is respectfully requested.

If other claim language is deemed appropriate by the Examiner to further define and differentiate applicant's invention from the references cited, a telephone interview is respectfully requested in order to advance the application to allowance.

The other references cited by the Examiner, but not applied, have been studied and are not considered to be any more pertinent than the references relied upon by the Examiner.

It is submitted that the claims distinctly define the applicant's invention and distinguish the same from the prior art. Reconsideration of the application is respectfully requested. Accordingly, a formal Notice of Allowance is solicited.

While the applicant's attorney has made a sincere effort to properly define applicant's invention and to distinguish the same from the prior art, should the Examiner deem that other

language would be more appropriate, it is requested that a telephone interview be had with the applicant's attorney in a sincere effort to expedite the prosecution of the application.